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32-20230: Recombinant Human/Murine/Rat Thymosin-Beta4(Discontinued)

Reactivity : Mouse

Alternative Name : TBeta-4, Hematopoietic system regulatory peptide, Seraspenide, TMSB4X, TB4X, TMSB4

Description

Source:E.coli

Thymosin-Beta4 is a small, actin-sequestering protein belonging to the thymosin-Beta family that is found at high concentrations within the spleen, thymus, and peritoneal macrophages, where it is most notably responsible for the organization of cytoskeletal structure. In mammalian tissues, this protein acts as a modulator for the polymerization/depolymerization of actin through the formation of a 1:1 complex with the monomer G (globular)-actin, and inhibits actinÂ's polymerization to form F (filamentous) actin, which together with other proteins binds microfilaments to construct the cytoskeleton. Commonly found at significant quantities within the brain, lungs, liver, kidneys, testes, and heart, thymosin-Beta4 has also been shown to be synthesized by cells unrelated to the reticuloendothelial system, such as myoblasts and fibroblasts, and expressed at irregular levels by several hemopoietic cell lines, malignant lymphoid cells and myeloma cells. In addition to regulating actin polymerization, research has also found thymosin-Beta4 to stimulate the secretion of hypothalamic luteinizing hormone-releasing hormone and luteinizing hormone, inhibit the migration of peritoneal macrophages, induce phenotypic changes in T cell lines during early host defense mechanisms, and inhibit the progression of hematopoietic pluripotent stem cells into the S-phase. Recombinant Human/Murine/Rat Thymosin-Beta4 is a 5.2 kDa glycoprotein containing 45 amino acid residues.

Product Info

Amount : 20 µg / 100 µg

Purification : Purity: >= 95% by SDS-PAGE gel and HPLC analyses.

Amino Acid : RMSDKPDMAE IEKFDKSKLK KTETQEKNPL PSKETIEQEK QAGES

Application Note

Pretreatment of primary lung fibroblasts with recombinant Thymosin-Beta4, using a concentration of 0.5 - 10 ÃÂµg/ml, produces a protective effect against hydrogen peroxide induced cell death.